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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,682	01/16/2001	Masum Choudhury	A1-057 US	4082

7590

07/02/2003

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EXAMINER

WANG, GEORGE Y

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,682

Applicant(s)

CHOUDHURY ET AL.

Examiner

George Y. Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-29, 31-39 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-29, 31-39 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 28 May 2003 has been entered.

Drawings

2. New corrected drawings are required in this application because this application has been filed with informal drawings which are acceptable for examination purposes only. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

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be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-11, 13-16, 18-25, 27-29, 31-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunin et al. (U.S. Patent No. 5,907,651, from hereinafter "Bunin") in view of Yanagawa et al. (U.S. Patent No. 5,297,228, from hereinafter "Yanagawa").

Bunin discloses a passive alignment fiber optic connection system (fig. 3) and method having a two connector modules (fig. 3, ref. 24, 32) with a plurality of optical fibers (fig. 3, ref. 36) terminating flush against the connector face (col. 4, lines 29-32). Bunin also teaches at least two projecting pins (fig. 3, ref. 38) with corresponding pin passages (fig. 3, ref. 42) spaced from one another and from optical fibers with predetermined alignment patterns (fig. 4, ref. 54, 60, 100; col. 4, lines 55-58) for center-to-center alignment between connectors. The

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respective ends of the fibers, which are generally perpendicular to the connector face, are closely spaced (fig. 3) from that of the other connector, whose face is also generally perpendicular to the length of the guides, before fully engaging in contact alignment (col. 2, lines 23-54). Bunin also teaches the use of filler to accommodate fiber waveguides (col. 4, lines 62-65).

However, Bunin fails to specifically disclose a substrate, which contains no fibers and no grooves for receiving fibers, that serves as an intermediary between the two connector modules. Furthermore, the Bunin reference does not specifically teach a substrate that is made of two wafers such that one wafer has a plurality of waveguides while the other has a plurality of channels with when assembled together, contains filler to accommodate the waveguides.

Yanagawa discloses an optical waveguide connector with an intermediary substrate module (fig. 5, ref. B2) that contains waveguides that are generally perpendicular to the face of the substrate and no fibers or grooves for receiving fibers. Yanagawa also teaches two wafers, one having a plurality of waveguides (fig. 2) while the other having a plurality for corresponding channels (fig. 1) for assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have sandwiched between two connector modules a dual wafer substrate module containing no optical fibers or grooves for receiving fibers since one would be motivated by a high-reliability connection that can be carried out in a short time (col. 2, lines 2-7). Furthermore, providing a waveguide

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substrate not only permits ease of connection, but also significantly reduces optical loss (col. 3, lines 11-12).

It would have also been obvious to one of ordinary skill in the art at the time the invention made to have used filler for the combination of the wafers in the substrate of Yanagawa as with the connector of Bunin since one would be motivated to hold and fix the waveguides in a proper spaced relationship to facilitate accurate alignment (abstract).

5. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunin and Yanagawa in view of Applicant's Admission of Prior Art (AAPA).

Bunin and Yanagawa disclose the optical connection system as recited above. However, neither of the references specifically disclose the connection system for use in DWDM products.

AAPA discloses the use of connection systems in DWDM products (pg. 3, line 23 – pg. 4, line 4).

It would have been obvious to one of ordinary skill at the time the invention was made to make use of a connection system in DWDM products since it is well known that in DWDM products, multiplexing can be used to combine channels of difference wavelengths with minimum inter-channel cross-talk (pg. 3, lines 13-15).

Response to Arguments

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6. Applicant's arguments filed 28 May 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant argues that the Bunin reference is too concerned with "the approach for making ferrules with aligned fibers" that it does not sufficiently serve as a passive alignment optical fiber connection system. Examiner notes, however, that the Bunin reference does deal with alignment, and this teaching is acknowledged by Applicant as well (pg. 6, lines 9-12). Furthermore, whether or not Applicant agrees with the modification of Bunin reference with the teachings found in the Yanagawa reference, the fact is, there is plenty of motivation clearly indicated in the references that warrant this combination. In fact, Applicant acknowledges that these motivations are found in the references (pg. 5, lines 24-28) and admits that it would be possible to combine only with "applicant's guidance." By this, Examiner notes that the combination Applicant is seeking to refute is, in fact, admittedly possible to one of ordinary skill in the art. Therefore, one would recognize that the teachings of Bunin and Yanagawa are not too divergent for one of ordinary skill in the art to

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combine and therefore, Examiner holds to the validity of the references and maintains the rejection.


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 703-305-7242. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

gw
June 27, 2003


ROBERT H. KIM
SUPERVISING PATENT EXAMINER
TECHNOLOGY CENTER 2870